REMARKS

Claims 1-30 remain pending in the application. Claims 1, 5, 8, 12-15, 18, 22-28 have been amended. No claims have been added. No claims have been canceled.

It is respectfully requested that the present amendments to the claims be entered into the record.

Claim Rejections

35 USC §112, First Paragraph

Claims 1-4, 8-14,18-21 and 25-27 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. In particular, the Examiner asserts that "insert a route" has not been adequately defined in the specification. Applicant previously argued in the responses to Office Actions mailed September 7, 2005 and June 13, 2005 that "insert a route" takes its ordinary meaning in the relevant arts. With regards to computer data networks, the ordinary meaning of "insert a route" is well-known to mean inserting a route into a routing table, forwarding table or other such table that contains data forwarding information.

Applicant did not specifically mention a routing table in the specification as Applicant believes that it is well-known and inherent that one must "insert a route" into a routing table, forwarding table, or other such table that contains forwarding information. Applicant is willing to change "insert a route" to "add a route" if this alleviates confusion, as Applicant believes the limitations share the same meaning with regards to computer data networks. The proposed claim limitation of "add a route" is supported in the specification by tag IP_ROUTE_ADD. As by way of example and not limitation, tag IP_ROUTE_ADD includes a destination network number, a destination network mask, a gateway IP address, and a metric value (Specification Para. 00015; Figure 2). Applicant

respectfully submits that these values (destination network number, destination network mask, gateway IP address, and metric value) are well known in the art as **values common to a route within a routing table of a host**. For example, a host computer running Windows 2000 has an IP routing table with routes consisting of the following fields: network destination, network mask, gateway, interface, and metric ("The Windows 2000 IP Routing Table" (hereinafter "IP Routing)). [1] Furthermore, while Applicant did not incorporate by reference and therefore does not rely on for support, document "draft-Carrel-info-pppoe-ext-00; PPP Working Group, Internet Draft, Category: Informational" dated May 2000, (written by named inventors), (hereinafter "draft-Carrel"), submitted by Applicant in an IDS on 5/13/05, describes the IP_ROUTE_ADD tag to "contain[] a IP route that MAY be used by the Host to populate it's routing table" (Section entitled 0x0121 IP_ROUTE_ADD in draft-Carrel). Therefore, in light of draft-Carrel and IP Routing, a person of ordinary skill in computer data networks would understand that an IP_ROUTE_ADD tag that includes a destination network number, a destination network mask, a gateway IP address, and a metric value, indicates adding or inserting a route into a routing table of a host. Accordingly, Applicant respectfully submits that claims 1-4, 8-14, 18-21 and 25-27 satisfy the requirements of 35 U.S.C § 112, first paragraph.

Furthermore, Applicant notes that original claims 1 and 18 included the limitation of "determining a set of network layer information" and "applying the set of network layer information to the host at the data link layer" (Original claim 1, 18). As is well known in the art, **network layer** information refers to the **network layer of the OSI model**. The network layer of the OSI model is responsible for **routing and switching**. [2] Also well known in the art, **data link layer** refers to the **data link layer of the OSI**

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[1] See "The Windows 2000 IP Routing Table", February 28, 2000.

[2] See The OSI Model, Rhys Haden 1999-2001. "Network Layer 3: This layer is responsible for the delivery of packets end to end and implements a logical addressing scheme to help accomplish this. Routing packets through a network is also defined at this layer plus a method to fragment large packets into smaller ones depending on MTUs for different media (Packet Switching). Once the data from layer 2 has been received, layer 3 examines the destination address and if it is the address of its own end station, it passes the data after the layer 3 header to layer 4."

model. The data link layer is responsible for providing one or more data link connections between two network devices. [3]

Rejection Clarifications

Applicant respectfully submits that the Office Action overlooks certain limitations of the later independent claims in the application. For example, the Office Action has grouped claims 12, 22, and 25-27 under the same rejection (Office Action dated 6/6/06, page 8), however, claims 12, 22, and 25-27 contain different limitations. As an example, claim 12 requires "establishing a Point to Point Protocol over Ethernet (PPPoE) session" while claim 25 requires "a **single** host establishing **multiple simultaneous** PPPoE sessions for access to different ones of a plurality of content servers". If the rejection is maintained, Applicant respectfully requests the rejection be clarified to address each limitation.

Furthermore, Applicant believes the Office Action, in reference to claims 10, 12, 13, 22, 23, 24, 25, 26, 27, inadvertently cites the wrong reference (Siegel as opposed to Chiles). Applicant's response below assumes this was in error.

35 U.S.C. §102

Claims 1-10, 12, 13, and 15-30 have been rejected under 35 U.S.C. §102(e) as being anticipated by Chiles et al., U.S. Patent Publication No. 2001/0036192 ("Chiles"). Applicant does not admit that Chiles is prior art and reserves the right to swear behind the reference at a later date. Nonetheless, Applicant respectfully submits that Chiles does not teach each and every element of the invention as claimed in claims 1-10, 12, 13, and 15-30.

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[3] See The OSI Model, Rhys Haden 1999-2001. "Data Link Layer 2: This layer deals with getting data across a specific medium and individual links by providing one or more data link connections between two network entities. End points are specifically identified, if required by the Network layer Sequencing. The frames are maintained in the correct sequence and there are facilities for Flow control and Quality of Service parameters such as Throughput, Service Availability and Transit Delay".

Meaning of "Host"

Chiles describes client devices 405 connected through a network 410 to the home gateway device 415 (Para 0055; Fig 4). Client devices may include personal computers with various operating systems (Para 0055; Fig 4). Chiles describes that the **home gateway device 415 includes communication devices 420 such as cable modems, DSL modems**, etc. (Para. 0056; Fig 4). Thus, the elements 415 and 420 of Figure 4 represent a single device. As between the client devices and the separate home gateway device, the Office Action states that the home gateway device 415 is a "host". [4] The Office Action also equates the communication devices within home gateway device 415 as customer premise equipment.[5] Thus, the Office Action takes the position that the home gateway device is a host, and that host includes customer premise equipment. Applicant respectfully submits that the claims as amended require that **a host is separate from a customer premise equipment** (see amended claims 1, 5, 8, 12, 15, and 18). Applicant has amended to clarify that, if any of the devices of Chiles are to be considered a "host", a 405 client device would be that host. This is not an arbitrary redrawing of boxes, because other limitations of the claims address interactions between a host and a remote access concentrator through the customer premise equipment.

Claims 1

Applicant's amended claim 1 is directed towards a mechanism to establish a "**session at a data link layer** between a **host** and a remote access concentrator **through a customer premise equipment,** the customer premise equipment is **separate from the host**", and determine "a set of network layer information corresponding to the session" and "applying the set of **network layer information to the host at the data link layer to insert a route to at least one content server**, the at least one content server being **identified by the set of network layer information**". Thus, claim 1 requires a **data link**

[4] "Chiles inherently teaches a second session to a second server since there are multiple links between the **host (i.e., the gateway of Chiles)**" (Office Action dated 6/6/06, page 5).

layer session between a host and a remote access concentrator, determining **network layer information** from corresponding to the session, and applying the set of **network layer information to the host at the data link layer to insert a route to at least one content server**.

Chiles does not describe the above limitations as Chiles discusses a different problem than Applicant. Chiles discusses the problem of identifying and distinguishing individual networked devices within a single household so as to enforce or enable preferences and features distinguishable among individual devices (See Para. 0003-0004). Chiles identifies and distinguishes individual network devices by connecting multiple networked client devices through a home gateway device to a home system over a single communication tunnel (Para. 0007). The **home gateway device includes communication device 420 (different types of modems)**, a PPPoE access concentrator 717, an L2TP access concentrator 719 and a dialer module 721 (Para. 0056 and 0063). A **single** L2TP tunnel is established between the home gateway device and the host system to carry multiple PPP sessions. Chiles describes the home gateway device as "handling multiple, simultaneous PPP sessions with the PPPoE enabled client devices" (Para. 0065). **Each client device** has "its **own** PPP **session**", which "permits the client device **to receive its own unique identifier from the host system**", for example an Internet address (Para. 0065). Thus, Chiles describes a system where multiple client devices each have a **single PPP session** so as to obtain a unique identifier (IP address) from the host system. Accordingly, each client device is individually distinguished so as to enforce or enable preferences unique for each device.

Applicant, in contrast, is solving the problem of allowing **a user at a single host device** to have **multiple data link layer sessions** so as to improve access to multiple services. By way of example and not limitation, Applicant solves this problem by determining network layer information (e.g., network layer of the OSI model) and transmitting this network layer information to the host at the data link layer (e.g., of the

[5] "customer premise equipment (CPE) is taught by Chiles in paragraphs 55-56. Applicant defines CPE as cable modem, DSL modem etc. ... Chiles discloses a session through a cable modem, xDSL modem, satellite modem etc.." (Office Action dated 6/6/06, pages 2-3).

OSI model).[6] The network layer information may include routing information to at least one content server. The host may then insert this information, as a route, into the host's routing table. Multiple routes to multiple content servers may be inserted into the host's routing table in this fashion. As such, routes inserted into the host routing table identify which data link layer session interface the client should use thereby allowing a user to access multiple services from multiple service providers with multiple data link layer sessions. As by way of further example and not limitation, a user at a single host device could have an account with two separate service providers, one offering a premium video service and the other offering e-mail and other conventional access to the Internet. The user can access the premium service and conventional access to the Internet at a single host device with two sessions **without** terminating either of the sessions (See Spec, 0004, 0018-0020).

Claim 5

Applicant's amended claim 5 is directed towards a mechanism that establishes a "**first session** with a data link layer protocol between a host and a first remote access concentrator through a customer premise equipment, the **customer premise equipment is separate from the host**" and "establishing a **second session** with the data link layer protocol between **the host and a second remote access concentrator** through the customer premise equipment **without terminating the first session**; and "determining" a first and second "set of network layer information" for the first and second session respectively. Thus, amended claim 5 requires the host to have multiple sessions, one between a first remote access concentrator and the other between a second remote access

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[6] See The OSI Model, Rhys Haden 1999-2001.
"Data Link Layer 2: This layer deals with getting data across a specific medium and individual links by providing one or more data link connections between two network entities. End points are specifically identified, if required by the Network layer Sequencing. The frames are maintained in the correct sequence and there are facilities for Flow control and Quality of Service parameters such as Throughput, Service Availability and Transit Delay."

"Network Layer 3: This layer is responsible for the delivery of packets end to end and implements a logical addressing scheme to help accomplish this. Routing packets through a network is also defined at this layer plus a method to fragment large packets into smaller ones depending on MTUs for different media (Packet Switching). Once the data from layer 2 has been received, layer 3 examines the destination address and if it is the address of its own end station, it passes the data after the layer 3 header to layer 4."

concentrator, where the second session is established without terminating the first session.

Chiles does not describe the limitations of claim 5. As previously discussed, Chiles identifies and distinguishes individual networked devices within a single household so as to enforce or enable preferences and features distinguishable among individual devices (See Para. 0003-0004). **Each client device** has "its **own** PPP **session**", which "permits the client device **to receive its own unique identifier from the host system**", for example an Internet address (Para. 0065). Thus, Chiles describes a system where multiple client devices each have a **single PPP session** so as to obtain a unique identifier (IP address) from the host system. Accordingly, each client device is individually distinguished so as to enforce or enable preferences unique for each device.

Applicant, in contrast, is solving the problem of allowing **a user at a single host device** to have **multiple data link layer sessions** so as to improve access to multiple services. As by way of example and not limitation, a user at a single host device could have an account with two separate service providers, represented by two separate remote access concentrators, one offering a premium video service and the other offering e-mail and other conventional access to the Internet. The user can access the premium service and conventional access to the Internet at a single host device with two sessions **without** terminating either of the sessions (See Spec, 0004, 0018-0020).

Claim 8

Applicant's amended claim 8 is directed towards a mechanism where a "communications session between a host and a remote access concentrator through a customer premise equipment" is established, "where the customer premise equipment is **separate** from the host"; and where "a set of network layer information" is retrieved and "a message having the set of **network layer information within a data link layer** of the message" is created and transmitted "from the remote access concentrator to the host" and "the **set of network layer information from the message at the data link layer**" is extracted and applied "**to the host to insert, into the host, a route**". Thus, claim 8

requires a message having network layer information within a data link layer of the message being transmitted from a remote access concentrator to a host, where the network layer information is applied to the host to insert a route into the host.

Chiles does not describe the limitations of claim 8. As discussed previously, Chiles identifies and distinguishes individual networked devices within a single household so as to enforce or enable preferences and features distinguishable among individual devices (See Para. 0003-0004). **Each client device** has "its **own** PPP **session**", which "permits the client device **to receive its own unique identifier from the host system**", for example an Internet address (Para. 0065). Thus, Chiles describes a system where multiple client devices each have a **single PPP session** so as to obtain a unique identifier (IP address) from the host system. Accordingly, each client device is individually distinguished so as to enforce or enable preferences unique for each device. Chiles does not discuss a message having network layer information within a data link layer created and transmitted from a remote access concentrator to a host (where the host is separate from the customer premise equipment) where the network layer information is applied to the host to insert a route into the host.

Claim 12

Applicant's amended claim 12 is directed towards a mechanism where a "Point to Point Protocol over Ethernet (PPPoE) session between a host to a remote access concentrator through a customer premise equipment" is established where "the customer premise equipment is **separate** from the host; and where a "set of **network layer information** corresponding to" an account associated with the PPPoE session is determined and applied "**to the host to insert, into the host, a route**".

Chiles does not describe the limitations of claim 12. As discussed previously, Chiles identifies and distinguishes individual networked devices within a single household so as to enforce or enable preferences and features distinguishable among individual devices (See Para. 0003-0004). **Each client device** has "its **own** PPP **session**", which "permits the client device **to receive its own unique identifier from the host**

system", for example an Internet address (Para. 0065). Thus, Chiles describes a system where multiple client devices each have a **single PPP session** so as to obtain a unique identifier (IP address) from the host system. Accordingly, each client device is individually distinguished so as to enforce or enable preferences unique for each device.

Claim 15

Applicant's claim 15 is directed towards an apparatus including a "storage to store a **set of network layer information**" and a "communications module coupled to the storage, the communications module to establish a communications session at a data link layer and perform network control protocol negotiation for the communications session" and a "processing unit", the "processing unit to **create a message having a subset of the set of network layer information within a data link layer of the message** and to transmit the message in the communications session to a host, wherein the subset **specifies a route from the host to a server associated through a customer premise equipment** with the session".

Chiles does not describe the limitations of claim 15. As discussed previously, Chiles identifies and distinguishes individual networked devices within a single household so as to enforce or enable preferences and features distinguishable among individual devices (See Para. 0003-0004). **Each client device** has "its **own** PPP **session**", which "permits the client device **to receive its own unique identifier from the host system**", for example an Internet address (Para. 0065). Thus, Chiles describes a system where multiple client devices each have a **single PPP session** so as to obtain a unique identifier (IP address) from the host system. Accordingly, each client device is individually distinguished so as to enforce or enable preferences unique for each device.

Claim 18

Applicant's amended claim 18 is directed towards a mechanism where a "session at a data link layer between a host and a remote access concentrator through a customer premise equipment, the **customer premise equipment is separate from the host**" is established, and "a set **of network layer information** corresponding to the session" is determined and **applied "to the host at the data link layer to insert, into the host, a**

route to one of a plurality of content servers, the one of a plurality of content servers being identified by the set of network layer information."

Chiles does not describe the limitations of claim 18. As discussed previously, Chiles identifies and distinguishes individual networked devices within a single household so as to enforce or enable preferences and features distinguishable among individual devices (See Para. 0003-0004). **Each client device** has "its **own** PPP **session**", which "permits the client device **to receive its own unique identifier from the host system**", for example an Internet address (Para. 0065). Thus, Chiles describes a system where multiple client devices each have a **single PPP session** so as to obtain a unique identifier (IP address) from the host system. Accordingly, each client device is individually distinguished so as to enforce or enable preferences unique for each device.

Claim 22

Applicant's amended claim 22 is directed towards a mechanism where "**multiple simultaneous** PPPoE sessions for a **single host** to access a plurality of content servers through a set of one or more network elements" are established where one of the network elements performs, for each of the PPPoE sessions, "accessing network layer information previously entered for an account associated to the PPPoE session, wherein different accounts for different ones of the plurality of content servers include distinguishing network layer information, wherein each of the PPPoE sessions is associated to a different one of the accounts, **creating a control protocol message with the accessed network layer information embedded, and transmitting the control protocol message to the host**. Thus, claim 22 requires **multiple simultaneous PPPoE sessions between a single host and a plurality of content servers through one or more network elements**, where the network elements access network layer information according to the PPPoE session and create and transmit a control protocol message with the accessed network layer information embedded into the message to the host.

Chiles does not describe the limitations of claim 22. As discussed previously, Chiles identifies and distinguishes individual networked devices within a single household so as to enforce or enable preferences and features distinguishable among

individual devices (See Para. 0003-0004). **Each client device** has "its **own** PPP **session**", which "permits the client device **to receive its own unique identifier from the host system**", for example an Internet address (Para. 0065). Thus, Chiles describes a system where multiple client devices each have a **single PPP session** so as to obtain a unique identifier (IP address) from the host system. Accordingly, each client device is individually distinguished so as to enforce or enable preferences unique for each device. Chiles does not discuss multiple simultaneous PPPoE sessions between a client device and a plurality of content servers through one or more network elements.

Claim 25

Applicant's amended claim 25 is directed towards a mechanism where "**a single host establish[es] multiple simultaneous PPPoE sessions** for access to different ones of a plurality of content servers through a set of one or more remote access concentrators" wherein "different accounts for different ones of the plurality of content servers include distinguishing network layer information, wherein each of the PPPoE sessions is associated to a **different one of the accounts**, wherein the **single host** performs" for "each of the PPPoE sessions, receiving from one of the set of remote access concentrators a control protocol message in which is **embedded at least some of the distinguishing network layer information for the account accessed** for the PPPoE session" and "**inserting a route to one of the plurality of content servers identified by that network layer information**".

Chiles does not describe the limitations of claim 25. As discussed previously, Chiles identifies and distinguishes individual networked devices within a single household so as to enforce or enable preferences and features distinguishable among individual devices (See Para. 0003-0004). **Each client device** has "its **own** PPP **session**", which "permits the client device **to receive its own unique identifier from the host system**", for example an Internet address (Para. 0065). Thus, Chiles describes a system where multiple client devices each have a **single PPP session** so as to obtain a unique identifier (IP address) from the host system. Accordingly, each client device is individually distinguished so as to enforce or enable preferences unique for each device.

Claim 28

Applicant's claim 28 is directed towards a network environment comprising of a "host device to distinguish **simultaneous PPP sessions** based on messages having network data embedded within a data link layer of the messages"; a "database to associate different network data to different ones of a plurality of content servers" and a "network element to communicatively couple the host device through a network to different ones of the plurality of content servers to access the database to create and transmit the messages to the host".

Chiles does not describe the limitations of claim 28. As discussed previously, Chiles identifies and distinguishes individual networked devices within a single household so as to enforce or enable preferences and features distinguishable among individual devices (See Para. 0003-0004). **Each client device** has "its **own** PPP **session**", which "permits the client device **to receive its own unique identifier from the host system**", for example an Internet address (Para. 0065). Thus, Chiles describes a system where multiple client devices each have a **single PPP session** so as to obtain a unique identifier (IP address) from the host system. Accordingly, each client device is individually distinguished so as to enforce or enable preferences unique for each device.

For at least these reasons, Applicant respectfully submits that the independent claims are allowable. The Applicant respectfully submits that the dependant claims are allowable for at least the reason that they are dependent on an allowable independent claim.

35 U.S.C. §103

Claims 11 and 14 have been rejected under 35 USC 103(a) as being unpatentable over Chiles in view of Araujo et al., U.S. Patent No. 6,112,245 ("Araujo").

Claims 11 and 14 depend on independent claims 8 and 12 respectively and are allowable for at least the same reasons.

Conclusion

It is respectfully requested that the application be examined in the light of the Amendment and the Remarks above. It is respectfully submitted that all rejections have been overcome and that all pending claims 1-30 are in condition for allowance. An early notice of allowance is respectfully and earnestly sought.

Invitation for a telephone interview

The Examiner is invited to call the undersigned at 408-720-8300 (Pacific time) to help expedite timely disposition of this case.

Charge our Deposit Account

Please charge any shortage to our Deposit Account No. 02-2666.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Date: August 22, 2006

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